NOTES, ABSTRACTS, AND REVIEWS.

DR. HELLMANN RETIRES.

Prof. Dr. G. Hellman announces his retirement from the directorship of the Prussian Meteorological Institute on October 1, 1922. Upon the same date he became professor emeritus, instead of ordinary professor, in the University of Berlin.

In his notice of retirement Dr. Hellmann expresses his grateful thanks to his many colleagues both at home and abroad for favors received during his long period of service. He was connected with the Meteorological Institute for 43 years.

NEW NORWEGIAN WEATHER MAPS.

The Bergen Division of the Norwegian Meteorological Institute began on January 1, 1922, the issue of twice-daily morning and evening weather maps prepared in accordance with the theoretical views expressed in various publications.[1]

The size of the charts is 37 by 51½ cm. and they cover the area between the Mediterranean on the south and about 77° north latitude and longitude 50° east to 50° west. The observational data are those received for the daily forecast service. The direction and force of the wind and the temperature are shown graphically in their respective geographic positions on the chart and isobars are drawn. Up to this point the maps are of the usual type of synoptic charts; the distinctly new feature of the maps is the drawing in of the warm front, the cold front, and the occluded fronts which have been found to exist by the analysis of the observational material. A short text is affixed which gives information not elsewhere presented concerning the basis for drawing the respective fronts.

The authors say:

> The maps are destined to illustrate the importance of discontinuities and they are often purposely drawn with a somewhat exaggerated distinctness of these traits.
>
> The scanty data from many parts of Europe often render the analysis impossible, or at least fairly hypothetical and we must make strong reservations as to the correctness of many details regarding the constructed fronts.
>
> The scientific preparation of the maps has been made by Meteorologists E. Calwagen, J. Eythorsson, J. Schinze and F. Spinnagr.

—*A. J. H.*

[1] *Geofisiske Publikationer*, Kristiania, "On the structure of moving cyclones"; "Meteorological conditions for the formation of rain"; "Life cycle of cyclones and the polar front theory of atmospheric circulation". J. Bjerknes and H. Solberg.

CLIMATOLOGICAL ATLAS OF NORWAY.[1]

A new edition of Mohn's *Atlas of the Climate of Norway* has just been published. The atlas contains 60 maps and treats all the meteorological elements except precipitation. The bases of these maps are the tables of climate calculated from the observations of the Norwegian Meteorological Institute, gathered and elaborated during the years 1847-1913. The observations were organized on the international model after the first International Meteorological Congress, at Vienna in 1873. The execution and elaboration of observations are described in the "Jahrbuch des Norwegischen Meteorologischen Instituts."

Plates 1-20. Temperature of the air.
21-28. Humidity of the air.
29-40. Pressure and wind.
41-44. Force of the wind.
45-48. Days of tempests and most frequent direction.
49-52. Cloudiness.
53-56. Days of cloud.
57-60. Days of thunderstorms.

The authors have made a very careful and comprehensive study and the material is well planned.

One interesting feature is the maps showing average monthly temperatures. The contrast between the summer and winter months is brought out very clearly by the steepness of the temperature gradient between the marine climate of the coast and the continental mountain climate. There are very few isotherms for the summer months, but a considerable number of them in the winter months. The lines of equal annual range are also much crowded between coast and interior.

The water-vapor tension remains about the same for January, July, and October, while April shows a slight decrease. The relative humidity is higher in summer than in winter. The pressure gradients follow closely those of temperature for each month.—*G. F. H.*

[1] H. Mohn, Atlas de Climat de Norwége, Nouvelle edition par Aage Grenrud et Kristen Irgens. Geofisiske Plubl. Vol. 2, No. 7, Kristiania, 1922.

BOLETIM METEOROLOGICO.[1]

The Brazilian weather service (Dr. Sampaio Ferraz, director) has just issued a bulletin written in Portuguese containing a large amount of valuable meteorological data from 1881 to 1914. This bulletin, together with the records of the Argentine service, now places within reach of climatologists reliable observations covering fairly long periods of time for a large part of South America. The Brazilian publication contains the records of the observatory at Rio de Janeiro in great detail, and those of 59 other regular stations throughout the country, and 32 rainfall stations in lesser detail. No detailed maps are attempted, as in the publication of the Argentine service, for it must be remembered that there are large stretches of the interior of Brazil which are scarcely known, and that the 91 stations are so scattered as to make the construction of a correlated map extremely difficult. The three maps of the distribution of rainfall in 1914, which are included, show this difficulty in their patchy character and in the large area still blank. One of the maps shows the distribution throughout the year, while in the other two, the year is divided into two "semesters" of six months each, from January to June, and July to December. The reason for this division of the year is not given.

[1] Anno de 1914, 4to, 121 pp., 3 maps, Directoria de Meteorologia, Rio de Janeiro, 1922. Cf. review in MO. WEATHER REV., June, 1922, 50, 309-310.